

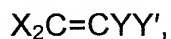
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-15 (Canceled)

Claim 16 (Currently Amended): A tagged scale-inhibiting polymer comprising scale inhibiting structural units and tagging structural units, wherein the tagging units ~~are~~ comprise units ~~deriving~~ formed from a monomer having the following formula:



wherein:

the radicals X, which may be identical or different, are each a hydrogen atom, or a C₁-C₄ alkyl radical,

Y is a hydrogen atom or a C₁-C₄ alkyl radical,

Y' is a radical having the formula -L-Arom, wherein:

L is a covalent bond or a divalent organic linking group optionally comprising heteroatoms, and

Arom is a group comprising at least two conjugated aromatic rings, said rings comprising conjugated carbon atoms, and optionally nitrogen or oxygen atoms, and, linked to said carbon atoms, hydrogen atoms or said carbon atoms being optionally substituted.

Claim 17 (Currently Amended): A copolymer as defined by Claim 16, wherein the tagging units ~~are~~ comprise units ~~deriving~~ formed from the monomer having formula $X_2C=CY Y'$ and wherein Arom is a group having at least 10 conjugated carbon atoms.

Claim 18 (Previously Presented): A copolymer as defined by Claim 17, wherein the conjugated aromatic rings are C_5 or C_6 rings.

Claim 19 (Previously Presented): A copolymer as defined by Claim 16, wherein Arom is an optionally substituted group comprising naphthalene, an anthracene, a pyrene or a phenanthrene moiety.

Claim 20 (Currently Amended): A copolymer as defined by Claim 16, wherein L is a covalent bond or a divalent C_1 - C_{12} alkyl radical, or a group having the formula -O-, -CO-O-, -CO-NH-, -O-CO-.

Claim 21 (Currently Amended): A copolymer as defined by Claim 16, wherein the tagging units ~~are~~ comprise units ~~deriving~~ formed from vinyl-anthracene.

Claim 22 (Previously Presented): A copolymer as defined by Claim 16, wherein the molar amount of tagging units in the copolymer ranges from 0.01 to 10%.

Claim 23 (Currently Amended): A copolymer as defined by Claim 16, wherein the scale inhibiting units ~~derive~~ are formed from monomers selected from the group consisting of:

vinyl sulfonic acid, or vinyl sulfonate salts;
vinyl phosphonic acid, or vinyl phosphonate salts;
acrylic acid, methacrylic acid;
maleic anhydride, maleic acid;
styrene-p-sulfonic acid, or styrene sulfonate salts;
acrylamido-2-methylpropanesulfonic acid (AMPS), and
mixtures thereof.

Claim 24 (Previously Presented): A composition comprising the scale-inhibiting copolymer as defined by Claim 16.

Claim 25 (Previously Presented): A composition as defined by Claim 24, in fluid state.

Claim 26 (Previously Presented): A composition as defined by Claim 25, wherein said fluid comprises a scale inhibiting amount of the copolymer.

Claim 27 (Previously Presented): A composition as defined by Claim 25, wherein said fluid comprises industrial water systems including boilers, cooling towers, desalination plants, geothermal power production, mineral ore extraction, paper pulping or paper manufacture.

Claim 28 (Previously Presented): A composition as defined by Claim 25, wherein said fluid is an oilfield fluid.

Claim 29 (Currently Amended): A composition as defined by Claim 28, wherein the fluid is seawater, formation water, produced water, a drilling fluid, a completion fluid, a stimulating fluid, or a squeezing fluid.

Claim 30 (Previously Presented): A method for preventing or controlling scale formation in systems comprising fluid circulation, which comprises the steps of:

(a) adding in the fluid a scale-inhibiting amount of a tagged scale-inhibiting polymer, or forcing a tagged scale-inhibiting polymer into an oilfield wherein the fluid will be circulated,

(b) periodically, continually, or continuously measuring the amount of tags in the fluid, and

(c) periodically, continually, or continuously further adding more tagged scale inhibiting copolymer when the measured amount is below a given value, and/ or reinforcing the tagged scale inhibiting polymer into the oilfield, wherein the scale-inhibiting copolymer is a tagged scale-inhibiting copolymer as defined by Claim 16.

Claim 31 (Previously Presented): The copolymer as defined by Claim 17, wherein Arom has at least 14 carbon atoms in at least three conjugated aromatic rings.

Claim 32 (Previously Presented): The composition as defined by Claim 26,
said fluid comprising 0.1 to 1000 ppm by weight of copolymer.